

PRELIMINARY SURVEY OF THE TRICHOPTERA OF NORTH DAKOTA¹

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Abstract.—Collections of Trichoptera dating from 1956 were examined. A total of 102 species, most of which represent new state records for North Dakota, were represented in the collections.

Until recently, the description of the caddisfly fauna of North Dakota has received little attention. A number of species were listed in the ecological studies of Stoaks (1975), Harris (1978), and Harris and Carlson (1978). In addition, Harris and Carlson (1977) and Harris et al. (1978) have recorded state records for several species. Since reports dealing with the distribution of caddisflies invariably have no mention of North Dakota, a cataloging of the known state fauna was initiated. This catalog is not meant to be all inclusive, but rather is meant to serve as a starting point for future research.

Those specimens deposited in the North Dakota State University Insect Collection from 1956 to present were identified. In addition, collections for the Regional Environmental Assessment Program from western North Dakota and the personal collections of the authors and a large number of graduate students were examined. The majority of the specimens were collected using light traps and sweep nets.

ANNOTATED LIST OF SPECIES

The records listed are for adult male caddisflies except as noted. Areas of the state in which specimens were collected are noted by the abbreviations of Figure 1. Dates of collection are also listed. Representative specimens from the study are deposited at North Dakota State University and the University of Mississippi.

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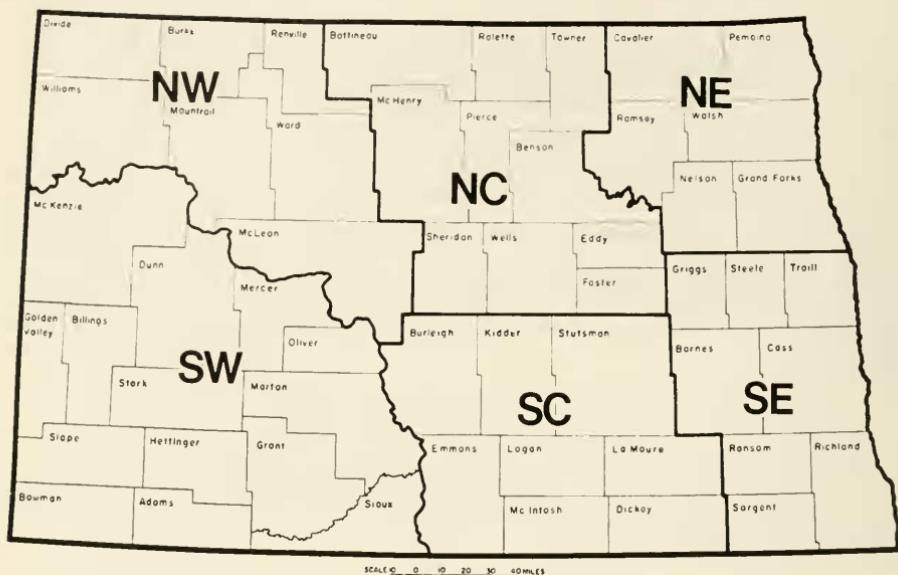


Fig. 1. County map of North Dakota with sampling regions.

Psychomyiidae

Psychomyia flava Hagen; SE; June–July.

Polycentropodidae

Neureclipsis bimaculata (Linnaeus); SE, SW; June.

Nyctiophylax vestitus (Hagen); SE; June.

Polycentropus aureolus (Banks); NC; July.

Polycentropus cinereus Hagen; NE, SE, SW; June–August.

Polycentropus flavus (Banks); NE; June.

Polycentropus interruptus (Banks); SE; July.

Hydropsychidae

Cheumatopsyche aphanta Ross; NE; June.

Cheumatopsyche campyla Ross; SE, SW; June–August.

Cheumatopsyche gracilis (Banks); NE; July.

Cheumatopsyche lasia Ross; SW; June–August.

Cheumatopsyche minuscula (Banks); NE, SE; June–July.

Cheumatopsyche pasella Ross; SE; June–August.

Cheumatopsyche pettiti (Banks); NE; July.

Cheumatopsyche smithi Gordon; NE, SW; June–July.

Cheumatopsyche speciosa (Banks); NE; July.

Hydropsyche betteni Ross; SE; May; identification from larvae and pharate adult.

Hydropsyche bidens Ross; NE, SE; June–September.

Hydropsyche simulans Ross; NE, SE; June–August.

Macronema zebratum (Hagen); NE; identification from larvae (Stoaks, 1975).

Potamyia flava (Hagen); NE, SE; June–September.

Symphitopsyche bifida (Banks); NE, SE, SW; June.

Symphitopsyche bronta (Ross); NE, SE; July–August.

Symphitopsyche morosa (Hagen); NE, SE; June.

Symphitopsyche piatrix (Ross); SE; June; identification from females.

Symphitopsyche riola (Denning); NE, SE; June.

Symphitopsyche slossonae (Banks); NE, SE; June–July.

Symphitopsyche walkeri (Betten & Mosely); NE; June.

Hydroptilidae

Agraylea multipunctata Curtis; NE, SE; June–August.

Hydroptila waubesiana Betten; NE, SE; July.

Ochrotrichia stylata (Ross); NE, SE; June–July.

Oxyethira serrata Ross; NE; June.

Phryganeidae

Agrypnia colorata Hagen; NE, NW, SC, SE; June–August.

Agrypnia deflata (Milne); NC, SE; July.

Agrypnia glacialis Hagen; SE; June.

Agrypnia improba (Hagen); SE; July–August.

Agrypnia macdunnoughi (Milne); SE; June.

Agrypnia straminea Hagen; SE; July–August.

Agrypnia vestita (Walker); SE; June–August.

Banksiola crotchi Banks; NC, NE, SE; June–August.

Phryganea cinerea Walker; NC, NE, NW, SE, SW; June–August.

Phryganea sayi Milne; SE; June.

Ptilostomis angustipennis (Hagen); NE; June.

Ptilostomis ocellifera (Walker); NE, SE; June.

Ptilostomis semifasciata (Say); NE, SE, SW; June–July.

Brachycentridae

Brachycentrus americanus (Banks); NE; identification from larvae (Stoaks, 1975).

Limnephilidae

Anabolia bimaculata (Walker); NC, NE, NW, SE, SW; June–August.

Anabolia consocia (Walker); NE; July–August.

- Anabolia ozburni* (Milne); NC; July.
Asynarchus aldinus (Ross); SE; July.
Asynarchus curtus (Banks); NC, NE, SE; June–August.
Frenesia missa (Milne); SE; November.
Hesperophylax designatus (Walker); NE, SE; June–August.
Leptophylax gracilis Banks; SE; June.
Limnephilus canadensis Banks; NE; July.
Limnephilus externus Hagen; NE; August.
Limnephilus hyalinus Hagen; NC, NE, NW, SE, SW; June–September.
Limnephilus indivisus Walker; NC; July.
Limnephilus infernalis (Banks); SE; September.
Limnephilus janus Ross; NE, NW, SE, SW; July–August.
Limnephilus labus Ross; NE, SW; August.
Limnephilus moestus Banks; SE; July–August.
Limnephilus ornatus Bank; NE, NW, SE; June–August.
Limnephilus perpusillus Walker; SE; July.
Limnephilus rhombicus (Linnaeus); NE; June.
Limnephilus secludens Banks; NE, NW, SE, SW; June–September.
Limnephilus sordidus (Hagen); NC; July.
Limnephilus submonilifer Walker; NE, SE; June–October.
Nemotaulius hostilis (Hagen); NC; June–July.
Philaretus queris (Milne); NC, NE, NW, SE; June–August.
Platycentropus radiatus (Say); SC; June.
Pycnopsyche guttifer (Walker); SE; September; identification from pharate adult.
Pycnopsyche lepida (Hagen); SE; August; identification from pharate adult.

Lepidostomatidae

- Lepidostoma sackeni* (Banks); SE; August.
Lepidostoma togatum (Hagen); SE; July.
Lepidostoma unicolor (Banks); NE; June.

Molannidae

- Molanna flavigornis* Banks; NC, NE, SE, SW; June–August.

Helicopsychidae

- Helicopsyche borealis* (Hagen); NE, SE; June.

Leptoceridae

- Ceraclea alagma* (Ross); NC, NE, SE; July–September.
Ceraclea ancylos (Vorhies); SE; July–August.
Ceraclea cancellata (Betten); NC; August.
Ceraclea diluta (Hagen); SE; June–July.

Ceraclea maculata (Banks); SE; June.
Ceraclea resurgens (Walker); SE; July.
Ceraclea tarsipunctata (Vorhies); SE, SW; August.
Ceraclea transversa (Hagen); SE; July–August.
Leptocerus americanus (Banks); SE; July–August.
Mystacides longicornis (Linneaus); NC, SC, SE, SW; June–August.
Mystacides sepulchralis (Walker); SE; July.
Nectopsyche albida (Walker); SE; July.
Nectopsyche candida (Hagen); NE, SE; June–July.
Nectopsyche diarina (Ross); NE, SE, SW; June–July.
Nectopsyche exquisita (Walker); NE; July.
Oecetis avara (Banks); NE; August; identification from pharate adult.
Oecetis cinerascens (Hagen); NC, NE, SE; July–September.
Oecetis immobilis (Hagen); SE, SW; June–August.
Oecetis inconspicua (Walker); NE, SC, SE, SW; June–August.
Oecetis ochracea (Curtis); NC, NE, SE, SW; June–August.
Triaenodes dipsius Ross; NE; June.
Triaenodes griseus Banks; NC, NE, NW, SE; June–September.
Triaenodes marginatus Sibley; SE; July.
Triaenodes tardus Milne; NC, NE, SE; June–August.

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LITERATURE CITED

- Harris, S. C. 1978. Distribution of insects in sandhill springbrooks of southeastern North Dakota. Ph.D. Dissertation, N.D. State Univ., Fargo. 239 pp.
- Harris, S. C. and R. B. Carlson. 1977. New records for Trichoptera in North Dakota. Entomol. News 88: 217.
- . 1978. Distribution of Hydropsychidae (Trichoptera) in sandhill streams of southeastern North Dakota. Proc. N.D. Acad. Sci. 31: 23–27.
- Harris, S. C., R. W. Katayama, and R. B. Carlson. 1978. New records of Trichoptera for North Dakota. Entomol. News. 89: 142.
- Stoaks, R. D. 1975. Seasonal and spatial distribution of riffle dwelling aquatic insects in the Forest River, North Dakota. Ph.D. Dissertation, N.D. State Univ., Fargo. 162 pp.